

10/501611

DT04 Rec'd PCT/PTO 14 JUL 2004

## SEQUENCE LISTING

<110> Pavan, William J.  
Loftus, Stacie K.  
<120> Alteration Of RAB38 Function To Modulate Mammalian Pigmentation  
<130> NIH-05102  
<160> 26  
<170> PatentIn version 3.1  
<210> 1  
<211> 8  
<212> DNA  
<213> Mus musculus  
<400> 1  
ctgggtgt 8  
<210> 2  
<211> 8  
<212> DNA  
<213> Mus musculus  
<400> 2  
ctggttgt 8  
<210> 3  
<211> 34  
<212> PRT  
<213> Homo sapiens  
<400> 3

Met Gln Ala Pro His Lys Glu His Leu Tyr Lys Leu Leu Val Ile Gly  
1 5 10 15

Asp Leu Gly Val Gly Lys Thr Ser Ile Ile Lys Arg Tyr Val His Gln  
20 25 30

Asn Phe

<210> 4

<211> 34

<212> PRT

<213> Rattus norvegicus

<400> 4

Met Gln Thr Pro His Lys Glu His Leu Tyr Lys Leu Leu Val Ile Gly  
1 5 10 15

Asp Leu Gly Val Gly Lys Thr Ser Ile Ile Lys Arg Tyr Val His Gln  
20 25 30

Asn Phe

<210> 5

<211> 34

<212> PRT

<213> Mus musculus

<400> 5

Met Gln Ala Pro His Lys Glu His Leu Tyr Lys Leu Leu Val Ile Gly  
1 5 10 15

Asp Leu Gly Val Gly Lys Thr Ser Ile Ile Lys Arg Tyr Val His Gln  
20 25 30

Asn Phe

<210> 6

<211> 47

<212> PRT

<213> Homo sapiens

<400> 6

Met Ala Ser Ala Thr Asp Ser Arg Tyr Gly Gln Lys Glu Ser Ser Asp  
1 5 10 15

Gln Asn Phe Asp Tyr Met Phe Lys Ile Leu Ile Ile Gly Asn Ser Ser  
20 25 30

Val Gly Lys Thr Ser Phe Leu Phe Arg Tyr Ala Asp Asp Ser Phe  
35 40 45

<210> 7

<211> 45

<212> PRT

<213> Homo sapiens

<400> 7

Met Ala Ser Arg Gly Ala Thr Arg Pro Asn Gly Pro Asn Thr Gly Asn  
1 5 10 15

Lys Ile Cys Gln Phe Lys Leu Val Leu Leu Gly Glu Ser Ala Val Gly  
20 25 30

Lys Ser Ser Leu Val Leu Arg Phe Val Lys Gly Gln Phe  
35 40 45

<210> 8

<211> 28

<212> PRT

<213> Homo sapiens

<400> 8

Met Thr Glu Tyr Lys Leu Val Val Val Gly Ala Gly Gly Val Gly Lys  
1 5 10 15

Ser Ala Leu Thr Ile Gln Leu Ile Gln Asn His Phe  
20 25

<210> 9

<211> 1439

<212> DNA

<213> Mus musculus

<220>

<221> misc\_feature

<223> Sequence is mRNA.

<400> 9  
acatagagct ccgggaaacg tcggtgccca gccccggctg tgcttcccag agcaagctcc 60  
aggctccgca agaccgcgg gcctccagga tgcagacacc tcacaaggag cacctgtaca 120  
agctgcttgtt gatcggcgcac ctgggtgtgg gcaagaccag cattatcaag cgctatgtgc 180

acaaaaactt	ctcctcgcac	taccggcca	ccattggtgt	ggacttcgcg	ctgaaggtgc	240
tccactggga	cccagagacg	gtggtgcgct	tgcagctctg	ggacattgct	ggtcaagaaa	300
gatttggaaa	catgacaaga	gtttattacc	ggaaagctat	gggggcattt	attgttttg	360
atgtcaccag	accagccaca	tttgaagccg	tggcaaagtg	aaaaaatgat	ttggactcaa	420
agttaacgct	ccctaatttgt	aagccagtgt	cagtggttct	gttggccaac	aaatgtgacc	480
aagggaagga	tgtgctttag	aacaatggac	tcaagatgga	ccagttctgc	aggagcatg	540
gcttcgtagg	atggtttcaa	acatcagcca	aggaaaacat	aaacattgat	gaagcctcaa	600
gatgcctgg	caagcacata	cttgcaaatg	agtgtgaccc	cctagagtct	atagaaccgg	660
acatttgtgaa	cccccatctc	acatcgccca	aggttgcag	ctgctctggc	tgtgccaaat	720
cctagaaggc	tcctctgctg	gcatatgaca	gacagaaccc	gtggccctca	tgaatcgtgc	780
ttcagtttt	ccttattacc	atttggta	agcgtcagga	tagggaaagca	catgtgacaa	840
gccaaagata	catgactgta	tggttcctgt	caaagaggaa	cagcaaatgt	tctttatgt	900
ttttcccacc	ccatcagcac	agtgtttaca	agctttaaa	atattagtct	gtcacaataat	960
gctgttttat	cattgagcaa	agccactcag	ggacacagac	agccctaata	tttggcctt	1020
taaatcaaca	aaggcttctg	gtcttcttga	gaagggaaat	aacagagcaa	ggcagaggc	1080
aagctaagtg	tggggatttg	tcttgcctg	gtgtgtctt	gttcaggtat	caatttggtc	1140
ccgggtggtc	tgtataggct	ataaaataga	aaccattcat	gttagaccta	agggttgkct	1200
gtgatgttcc	tcttcagagt	cgtgtgcaca	ggcagcctgg	gttttggc	tcacttgctg	1260
tgcctgaat	gctggttaa	ctgaaaactg	tatggaaaga	tctgctccct	gtatgtgcct	1320
ttcttcagc	ttcctctgac	tcaagctgca	ggactcttct	gtatgtggaa	gatataattat	1380
atataatttt	cacaagtgaa	aaataaaaca	ttaaaaatgc	tgtttccctg	tttctgata	1439
<210>	10					
<211>	291					
<212>	DNA					
<213>	Mus musculus					
<400>	10					
acatagagct	ccggaaacg	tcgggtcccc	gccccggctg	tgcttcccag	agcaagctcc	60
aggctccgca	agacccgcgg	gcctccagga	tgcagacacc	tcacaaggag	cacctgtaca	120
agctgttgtt	gatcgccgac	ctgggtgtgg	gcaagaccag	cattatcaag	cgctatgtgc	180
acaaaaactt	ctcctcgcac	taccggcca	ccattggtgt	ggacttcgcg	ctgaaggtgc	240
tccactggga	cccagagacg	gtggtgcgct	tgcagctctg	ggacattgct	g	291

<210> 11  
<211> 281  
<212> DNA  
<213> *Mus musculus*

<400> 11  
gtcaagaaaac atttggaaac atgacaagag tttattaccc ggaagctatg ggggcattta 60  
ttgttttga tgcaccaga ccagccacat ttgaagccgt ggcaaagtgg aaaaatgatt 120  
tggactcaaa gttaacgctc cctaattgtt agccagtgtc agtggttctg ttggccaaca 180  
aatgtgacca agggaaaggat gtgcattatga acaatggact caagatggac cagttctgca 240  
aggagcatgg cttegttagga tggtttggaaa catcagccaa g 281

<210> 12  
<211> 868  
<212> DNA  
<213> *Mus musculus*

<400> 12  
ggaaaacata aacattgtat aagcctcaag atgcctggtc aagcacatac ttgcaaata 60  
gtgtgacctc ctagagtcta tagaaccgga cattgtgaag ccccatctca catcgcccaa 120  
ggttgtcagc tgctctggct gtgc当地atc ctagaaggct cctctgtgg catatgacag 180  
acagaacccg tggccctcat gaatcgtgct tcagtttttc cttattacca ttttggtaa 240  
gcgtcaggat agggaaagcac atgtgacaaag ccaaagatac atgactgtat gttccctgtc 300  
aaagaggaac agcaaata 360  
ctttatgtgt tttccacccc catcagcaca gtgtttacaa 420  
gctttaaaaa tattagtctg tcacaatatg ctgttttatac attgagcaaa gccactcagg 480  
gacacagaca gccctaata 540  
ttgttccctt aaatcaacaa aggctctgg tcttcttgag 600  
aagggaata acagagcaag gcagaggtca agctaagtgt ggggatttgt cttgccctgg 660  
tgtgttttg ttcaggtatc aatttgtcc cgggtggctc gataggtcta taaaatagaa 720  
accattcatg gtagaccta 780  
gggttgkctg tgatgtttct cttcagagtc gtgtgcacag  
gcagcctggg cttttgtgt cacttgctgt gccctgaatg ctgggttaac tgaaaactgt  
atggaaagat ctgctccctg tatgtgcatt tcttcagct tectctgact caagctgcag  
gactctctg tatgtggaaag atatattata tatatttttc acaagtgaaa aataaaacat  
taaaaatgct gttccctgt ttctgtata 840  
868

<210> 13  
<211> 45  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic  
  
<400> 13  
gcgcgaatta accctcacta aagggtctga gcacccctgt cttct 45  
<210> 14  
<211> 45  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic  
  
<400> 14  
gcmcgtata cgactcacta tagggcccag ttgcaaaatt ccagt 45  
<210> 15  
<211> 47  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic  
  
<400> 15  
gcgggtata cgactcacta tagggccac aaacatgtcc tacttac 47  
<210> 16  
<211> 44  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic  
  
<400> 16  
gcmcgtata accctcacta aaggaaagct tccggactct ctac. 44

<210> 17  
<211> 21  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic  
  
<400> 17  
taggaaggag gattaaaccc g 21  
  
<210> 18  
<211> 21  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic  
  
<400> 18  
gaaactcctca tggctcactc c 21  
  
<210> 19  
<211> 26  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic  
  
<400> 19  
ggatatgaag ctccagtgt a gtgtac 26  
  
<210> 20  
<211> 25  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic  
  
<400> 20  
cactggacag aaacattatt gtcac 25

<210> 21  
<211> 26  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic  
<400> 21  
aagttatcag ccagttagat actgtg 26  
<210> 22  
<211> 25  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic  
<400> 22  
cacatgtggat atatctatcc tgacg 25  
<210> 23  
<211> 21  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic  
<400> 23  
ggcctccagg atgcagacac c 21  
<210> 24  
<211> 21  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic  
<400> 24  
ccagcaatgt cccagagctg c 21

<210> 25  
<211> 49  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic  
<400> 25  
ggggacaagt ttgtacaaaa aaggcaggctc catgcagaca cctcacaag 49  
<210> 26  
<211> 51  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic  
<400> 26  
ggggaccact ttgtacaaga aagctgggtt ctaggatttg gcacagccag a 51

<210> 25  
<211> 49  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic  
<400> 25  
ggggacaagt ttgtacaaaa aaggcaggctc catgcagaca cctcacaag 49  
<210> 26  
<211> 51  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic  
<400> 26  
ggggaccact ttgtacaaga aagctgggtt ctaggatttg gcacagccag a 51

## Human RAB38 DNA sequence

1 ggctgcgttt ccctggtcag gcacggcacg tctggccggc cgccaggatg caggccccgc  
61 acaaggagca cctgtacaag ttgtgggtga ttggcgacct gggcgtgggg aagaccagta  
121 tcatcaagcg ctacgtgcac cagaactttt cctcgacta ccgggccaca atcgcggtgg  
181 acttcgcgtt caagggtgtc cactgggacc eggagactgt ggtgcgcctg cagctctggg  
241 atatcgccagg tcaagaaaga tttggaaaca tgacgagggt ctattaccga gaagctatgg  
301 gtgcatttat tgcattcgat gtcaccaggc cagccacatt tgaagcgtg gcaaaatggaa  
361 aaaaatgattt ggactccaag ttaagtctcc ctaatggcaa accggttca gtggttttgt  
421 tggccaaacaa atgtgaccag gggaggatg tgctcatgaa caatggcctc aagatggacc  
481 agttctgcaa ggagcacggt ttctgtggat ggtttggaaac atcagcaaag gaaaataaa

541 acatttgcata agcctccaga tgcctggta aacacatact tgcaaatgag tgtgaccaa  
601 tggagtctat tgaggccgac gtcgtaaagc cccatctcac atcaacccaag gttgccagct  
661 gctctggctg tgccaaatcc tagtaggcac ctttgcgtt gtctggtagg aatgaccctca  
721 ttgttccaca aattgtgcct ctatTTTAC cattttgggt aaacgtcagg atagatatac  
781 cacatgtggc aagccaaaga tctatgcctc tgTTTTCA atgagagaga aatagcaaAT  
841 gttctttcta tgctttccctc accatcatac cagtgtttac aaactttga aaatatttag  
901 tctgttacaa aottcgtca ttagctgac caaaatcctg cagggccaca gtcggcactg  
961 ttatTTGCTT ctttaatca gcaaaggctt caagtcttaa aaaaaagggg gagaagaaca  
1021 aactagctgt caagtcaagg actggcttc accttgccct ggtgtctttt tccagatttc  
1081 aatatattct ctgatggctc gacaggccctt ttaatgtatgt gtatattttt cttccaaagat  
1141 gacctccatt ctggcagac ctaagagttt cctctgagtt agctctttgg aatcgtaac  
1201 acagggtgtgc tatattgtcc ttgtcttaac tgcacttgc catggcctgaa atgttggctt  
1261 aactgaatat tttatgtaaaaa gacatgcctc cataatgtgcc ttctgttag ctcttttga  
1321 ctcaagctgt ggggctccctc tatacatgtct atacatgtaa tatatattat atatatttttga  
1381 gcaagtgaac aataaaatcat taaaagataa aa

SF 1423179 v1